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Washington, DC 20460

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As the nation's largest agricultural organization, the American Farm Bureau Federation serves as the voice of agricultural producers at all levels of government. We have a long history and keen interest in the science and policy debate involving hypoxia in the Northern Gulf of Mexico and are pleased to submit these comments on the draft 2008 Gulf Hypoxia Action Plan.

The causes of, and solutions to, the Gulf Hypoxia problem are inherently complex. The Science Advisory Board's (SAB) panel indicates that, *'the size of the hypoxic zone varies considerably each year, depending on natural and anthropogenic factors."* This fact clearly underscores the fact that there can be no simple solutions for reducing, mitigating or controlling hypoxia in the Northern Gulf of Mexico. Moreover, because the SAB panel identified both natural and anthropogenic sources as causes of hypoxia, the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force has an obligation to look at both when considering an appropriate and achievable action plan. A prerequisite for developing a realistic and widely supported action plan must include an identification by the Task Force of all the natural and anthropogenic factors influencing the size of the hypoxic zone.

The SAB panel addressed the complex interactions between climate, weather, basin morphology, circulation patterns, water retention times, freshwater inflows, stratification, mixing and nutrient loadings when it characterized the extent of hypoxic conditions in the Gulf of Mexico. We believe the SAB panel findings point to significant confusion and hard scientific questions about the linkages between nutrients and the Hypoxic zone in the Northern Gulf of Mexico. The panel's conclusions also raise significant questions about whether or if any actions to accelerate nitrogen and phosphorus reduction will result in a change in size of the hypoxic zone. For example, the proposed action plan states -

> *"Overall, total annual loads to the Gulf from 2001-2005 show a 21% decline in nitrogen flux and a 12% increase in phosphorus flux when compared to averages from the 1980-1996 period…. However because of the complex interactions regarding nutrient fate and transport, and the existing uncertainties surrounding the linkages between nutrient fluxes and the size, duration and severity of the hypoxic*

zone, these changes are difficult to relate to changes in the measured size of the zone." (pages 10-11 Draft Gulf Hypoxia Action Plan, November 9, 2007)

"Net anthropogenic nitrogen inputs (NANI) and net phosphorus inputs for the Mississippi/Atchafalaya River Basin have declined in the last decade, because of more efficient use of fertilizer (as evidenced by increasing corn harvest and constant or declining fertilizer application rates)." (page 15, ibid.)

"The current five-year average [size of the zone] *(2003-2007), is 14,644 square kilometers (4,200 square miles), more than twice the size of the goal"*of the plan. (page 6, ibid.)

The lack of correlation between nutrients and the hypoxic zone raise significant questions in the minds of farmers and ranchers about whether any actions on their part will result in a change in size of the hypoxic zone. In fact, while the agricultural community has clearly reduced use of nutrients, the hypoxic zone has increased in size.

Secondly, in addition to nutrients, the SAB panel found other important factors influencing the formation and size of the hypoxia zone that are not addressed by the Task Forces' draft action plan. These factors are -

"While nutrients from the Mississippi-Atchafalaya River Basin coupled with temperature and salinity induced stratification are indicated as the primary causes of hypoxia in the NORTHER GULF OF MEXICO, other factors contribute to increasing the amount of nutrients delivered to the Gulf, including:

- Historic landscape changes in the drainage basin, primarily losses of freshwater wetlands, and increases in artificially drained areas that diminish the capacity of the river basin to remove nutrients, and

- Channelization and impoundments of the Mississippi River throughout the basin and delta and the loss of coastal wetlands,

- Changes in the hydrological regime of the Mississippi and Atchafalaya Rivers and the timing of the freshwater inputs that are critical to the stratification which is necessary for hypoxia. The diversion of a large amount of freshwater from the Mississippi River through the Atchafalaya has profoundly modified the spatial distribution of freshwater inputs, nutrient loadings, and stratification on the Louisiana-Texas continental shelf." (page 14, ibid.)

This statement highlights four important anthropogenic changes to the basin. Two of these cannot be rolled back or significantly altered - the conversion of the upper-Midwest from tall-grass prairie to the most productive and efficient farmland in the world; and the

channelization and levying of the Mississippi River to prevent flooding and enhance transportation. But this finding also points directly to two anthropogenic changes that *can* be managed and addressed in the action plan alongside the proposal to accelerate reductions in nitrogen and phosphorus.

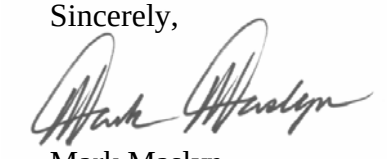
The first is the massive coastal protection/restoration program already broadly supported by the state of Louisiana, the federal government and various stakeholder groups. This program involves retaining river sediment and nutrients within the coastal marshes to the greatest degree possible by redistributing river water throughout the delta before it reaches the Gulf of Mexico. Not only does this programmatic approach have broad support but, "*there is substantial evidence that such a program would save wetlands now in jeopardy, and increase productivity and sequestration of both nutrients and carbon.*"

The second is hydrologic flow regime and river control structure currently managed by the Crops of Engineers at the juncture of the Mississippi and Atchafalaya Rivers. The SAB panel found that seasonal nutrient reduction strategies may be effective and spring fluxes and their distribution between the two river systems may be more effective in controlling hypoxia. As with the coastal restoration project, the Task Forces' action plan must give equal consideration to this management option as well.

We recognize the public policy issues associated with massive coastal restoration and managing the seasonal flow regime between the Mississippi and Atchafalaya rivers present difficult and unique problems. These two management options must not only be included in the Task Forces' action plan, but included on an equal basis with any nutrient reduction strategy.

Thank you for your consideration.

Sincerely,



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